

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

The Missouri Department of Natural Resources hereby issues a permit to:

Washington County PWSD#4
10264 Pine Drive
Bismarck, MO 63624

for the construction of (described facilities):

See attached.

Permit Conditions:

See attached.

Construction of such proposed facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, RSMo, and regulation promulgated thereunder, or this permit may be revoked by the Department of Natural Resources (Department).

As the Department does not examine structural features of design or the efficiency of mechanical equipment, the issuance of this permit does not include approval of these features.


A representative of the Department may inspect the work covered by this permit during construction. Issuance of a permit to operate by the Department will be contingent on the work substantially adhering to the approved plans and specifications.

This permit applies only to the construction of water pollution control components; it does not apply to other environmentally regulated areas.

December 18, 2018
Effective Date

December 17, 2020
Expiration Date


Edward B. Galbraith, Director, Division of Environmental Quality


Chris Wieberg, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Proposed construction includes a new disinfection system to consist of a Norweco Bio-Dynamic® tablet chlorinator, detention piping that will allow for more than a 15-minute contact time during peak flow, and a Norweco Bio-Dynamic® dechlorination chamber.

This project will also include general site work appropriate to the scope and purpose of the project and all necessary appurtenances to make a complete and usable wastewater treatment facility.

II. COST ANALYSIS FOR COMPLIANCE

Pursuant to Section 644.145, RSMo, when issuing permits under this chapter that incorporate a new requirement for discharges from publicly owned combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or [publicly owned] treatment works, the Department of Natural Resources shall make a “finding of affordability” on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the Federal Water Pollution Control Act. This process is completed through a cost analysis for compliance. Permits that do not include new requirements may be deemed affordable.

The Department is required to determine “findings of affordability” because the permit applies to a **combined or separate sanitary sewer system for a publically-owned treatment works**.

Cost Analysis for Compliance - The Department has made a reasonable search for empirical data indicating the permit is affordable. The search consisted of a review of Department records that might contain economic data on the community, a review of information provided by the applicant as part of the application, and public comments received in response to public notices of this draft permit. If the empirical cost data was used by the permit writer, this data may consist of median household income, any other ongoing projects that the Department has knowledge, and other demographic financial information that the community provided as contemplated by Section 644. 145.3. See the APPENDIX – COST ANALYSIS FOR COMPLIANCE in operating permit MO-0132519.

III. CONSTRUCTION PERMIT CONDITIONS

The permittee is authorized to construct subject to the following conditions:

1. This construction permit does not authorize discharge.
2. All construction shall be in accordance with the plans and specifications submitted by Taylor Engineering on October 9, 2018.

3. The Department must be contacted in writing prior to making any changes to the approved plans and specifications that would directly or indirectly have an impact on the capacity, flow, system layout, or reliability of the proposed wastewater treatment facilities or any design parameter that is addressed by 10 CSR 20-8, in accordance with 10 CSR 20-8.110(8).
4. State and federal law does not permit bypassing of raw wastewater, therefore steps must be taken to ensure that raw wastewater does not discharge during construction. If a sanitary sewer overflow or bypass occurs, report the appropriate information to the Department's Southeast Regional Office per 10 CSR 20-7.015(9)(E)2.
5. In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of 1 acre or more to obtain a Missouri state operating permit to discharge stormwater. The permit requires best management practices sufficient to control runoff and sedimentation to protect waters of the state. Land disturbance permits will only be obtained by means of the Department's ePermitting system available online at dnr.mo.gov/env/wpp/epermit/help.htm. See dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm for more information.
6. A United States (U.S.) Army Corps of Engineers (COE) permit (404) and a Water Quality Certification (401) issued by the Department or permit waiver may be required for the activities described in this permit. This permit is not valid until these requirements are satisfied. If construction activity will disturb any land below the ordinary high water mark of jurisdictional waters of the U.S. then a 404/401 will be required. Since the COE makes determinations on what is jurisdictional, you must contact the COE to determine permitting requirements. You may call the Department's Water Protection Program at 573-751-1300 for more information. See dnr.mo.gov/env/wpp/401/ for more information.
7. Upon completion of construction:
 - A. The Washington County PWSD #4 will become the continuing authority for operation, maintenance, and modernization of these facilities;
 - B. Submit an electronic copy of the as builts if the project was not constructed in accordance with previously submitted plans and specifications; and
 - C. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(D) and request the operating permit modification be issued.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

Disinfection equipment is being installed to meet a schedule of compliance for *E. coli* effluent limitations.

2. FACILITY DESCRIPTION

The existing facility has a STEP system and a recirculating sand filter. Tablet chlorination, detention piping for contact time, and tablet dechlorination are being installed.

The Washington County PWSD#4 WWTF is located at 10264 Pine Drive, Bismarck, in Washington County, Missouri. The facility has a design average flow of 20,000 gpd and serves a hydraulic population equivalent of approximately 270 people.

3. COMPLIANCE PARAMETERS

The facility is being upgraded to meet final effluent limits for *E. coli* of 1,030 #/100 mL weekly average and 206 #/100 mL monthly average during the recreational season from April 1 through October 31. The proposed project is required to also meet final effluent limits of <130 µg/L daily maximum and <130 µg/L monthly average for total residual chlorine and is required to monitor daily minimum and monthly average minimum for dissolved oxygen as established in the public noticed modification to Operating Permit MO-0132519.

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

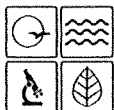
Construction will cover the following items:

- Disinfection – Disinfection is the process of removal, deactivation, or killing or pathogenic microorganisms.
 - Tablet Chlorinator – Installation of a tablet Norweco Bio-Dynamic® Model ITR 4000-S chlorination chamber receiving clarified effluent and prior to the chlorine contact piping. The tablet chlorinator shall have a design flow of 20,000 gpd and a maximum flow of 200,000 gpd. The system will dispense hypochlorite as the wastewater comes into contact with the tablets.
 - Chlorine Contact – Installation of approximately 178 lf of 18 inch SCH 40 PVC detention piping with approximately six (6) cleanouts and greater than a 40:1 length to width ratio. This detention piping will allow for more than a 15-minute contact time during a peak flow of 80,000 gpd.
 - Tablet Dechlorinator – Installation of a tablet Norweco Bio-Dynamic® Model ITR 4000-S dechlorination chamber receiving the chlorinated effluent and prior to Outfall No. 001. The tablet dechlorinator shall have a design flow of 20,000 gpd and a maximum flow of 200,000 gpd. The system will dispense sodium sulfite as the wastewater comes into contact with the tablets.

5. OPERATING PERMIT

Operating permit MO-0132519 will require a modification to reflect the construction activities. The modified Washington County PWSD#4 WWTF, MO-0132519, will be placed on public notice concurrently with construction permit issuance. Upon construction completion, submit the Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(D) and request the operating permit modification be issued.

Cailie Carlile, P.E.
Engineering Section
cailie.carlile@dnr.mo.gov



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

APPLICATION FOR CONSTRUCTION PERMIT –
WASTEWATER FACILITY

RECEIVED

OCT 09 2018

Water Protection Program

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED \$1000.00	CHECK NO. 2002
DATE RECEIVED 10-9-18	

APPLICATION OVERVIEW

The Application for Construction Permit – Wastewater Facility form is for construction pertaining to domestic wastewater treatment facilities, agrichemical facilities, and components thereof. This form has been developed in a modular format and consists of Part A and B. **All applicants must complete Part A.** Part B should be completed for applicants who currently land-apply wastewater or propose land application for wastewater treatment. **Please read the accompanying instructions before completing this form. Submittal of an incomplete application may result in the application being returned.**

PART A – BASIC INFORMATION

1.0 APPLICATION INFORMATION (Note – If any of the questions in this section are answered NO, this application may be considered incomplete and returned.)

- 1.1 Is this a Federal/State funded project? ☐ YES ☒ N/A Funding Agency: _____ Project #: _____
- 1.2 Is this an application for an agrichemical? ☐ YES (See instructions.) ☒ N/A
- 1.3 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?
☐ YES Date of Approval: _____
- 1.4 Has the department approved the proposed project's facility plan*?
☒ YES Date of Approval: _____ ☐ NO ☐ N/A (If Not Applicable, complete No. 1.5.)
- 1.5 [Complete only if answered Not Applicable on No. 1.4] Is a copy of the engineering report* for wastewater treatment facilities with a design flow less than 22,500 gpd included with this application?
☐ YES ☒ NO
- 1.6 Is a copy of the appropriate plans* and specifications* included with this application?
☒ YES Denote which form is submitted: ☒ Hard copy ☐ Electronic copy (See instructions.) ☐ NO
- 1.7 Is a summary of design* included with this application? ☒ YES ☐ NO
- 1.8 Is a general operating permit applicable?
☐ YES Submit the appropriate operating permit application to the Regional Office at least 60 days prior to operation.
☒ NO Enclose the appropriate operating permit application and fee submittal. Denote which form: ☐ B ☐ B2
- 1.9 Is the facility currently under enforcement with the department or the Environmental Protection Agency? ☐ YES ☒ NO
- 1.10 Is the appropriate fee included with this application? ☒ YES ☐ NO (See instructions for appropriate fee.)

* Must be affixed with a Missouri registered professional engineer's seal, signature and date.

2.0 PROJECT INFORMATION

2.1 NAME OF PROJECT

Washington County PWSD #4 - Disinfection

2.2 PROJECT DESCRIPTION

Installation of a pellet chlorinator, detention piping and a pellet dechlorinator.

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

Sludge disposal by a contract hauler. Sludge is stored in septic tanks.

2.4 DESIGN INFORMATION


- A. Current population: _____; Design population: 270
- B. Actual Flow: 1,700 gpd; Design Average Flow: 20,000 gpd;
Actual Peak Daily Flow: 80,000 gpd; Design Maximum Daily Flow: 80,000 gpd;
Design Wet Weather Event: _____

2.5 ADDITIONAL INFORMATION

- A. Is a topographic map attached? ☒ YES ☐ NO
- B. Is a process flow diagram attached? ☒ YES ☐ NO

2.6 ESTIMATED PROJECT CONSTRUCTION COST

\$ 25,000.00

3.0 WASTEWATER TREATMENT FACILITY					
NAME Washington County PWSD #4 WWTF		TELEPHONE NUMBER WITH AREA CODE (573) 734-2337		EMAIL ADDRESS suegoeken@hughes.net	
ADDRESS (PHYSICAL) 10264 Pine Drive		CITY Bismarck		STATE MO	ZIP CODE 63624
COUNTY Washington					
Wastewater Treatment Facility: Mo- 0132519 (Outfall 001 Of)					
3.1 Legal Description: ¼, SW ¼, NW ¼, Sec. 14 , T 35N , R 3E (Use additional pages if construction of more than one outfall is proposed.)					
3.2 UTM Coordinates Easting (X): 704506 Northing (Y): 4179875 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)					
3.3 Name of receiving streams: Tributary to Lost Creek					
4.0 PROJECT OWNER					
NAME Washington County PWSD #4		TELEPHONE NUMBER WITH AREA CODE (573) 734-2337		EMAIL ADDRESS suegoeken@hughes.net	
ADDRESS 10264 Pine Drive		CITY Bismarck		STATE MO	ZIP CODE 63624
5.0 CONTINUING AUTHORITY: Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the wastewater collection system.					
NAME Same		TELEPHONE NUMBER WITH AREA CODE		EMAIL ADDRESS	
ADDRESS		CITY		STATE	ZIP CODE
5.1 A letter from the continuing authority, if different than the owner, is included with this application. <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A					
5.2 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A MISSOURI PUBLIC SERVICE COMMISSION REGULATED ENTITY.					
A. Is a copy of the certificate of convenience and necessity included with this application? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
5.3 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A PROPERTY OWNERS ASSOCIATION.					
A. Is a copy of the as-filed restrictions and covenants included with this application? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
B. Is a copy of the as-filed warranty deed, quitclaim deed or other legal instrument which transfers ownership of the land for the wastewater treatment facility to the association included with this application? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
C. Is a copy of the as-filed legal instrument (typically the plat) that provides the association with valid easements for all sewers included with this application? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
6.0 ENGINEER					
ENGINEER NAME / COMPANY NAME Timothy D. Robbs, P.E.		TELEPHONE NUMBER WITH AREA CODE (573) 756-9226		EMAIL ADDRESS trobb@taylorengineeringllc.com	
ADDRESS 109 East Columbia		CITY Farmington		STATE MO.	ZIP CODE 63640
7.0 PROJECT OWNER: I hereby certify that I am familiar with the information contained in this application and to the best of my knowledge and belief such information is true, complete, and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders, and decisions, subject to any legitimate appeal available to applicant under Missouri Clean Water Law. I also understand the issuance of the construction permit does not guarantee the proposed wastewater treatment will meet the required effluent limitations of the issued Missouri State Operating Permit for this facility.					
PROJECT OWNER SIGNATURE 					
PRINTED NAME Sue Goeken				DATE 9/28/18	
TITLE OR CORPORATE POSITION President		TELEPHONE NUMBER WITH AREA CODE (573) 734-2337		EMAIL ADDRESS suegoeken@hughes.net	
Mail completed copy to: MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM P.O. BOX 176 JEFFERSON CITY, MO 65102-0176					
END OF PART A.					
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHETHER PART B NEEDS TO BE COMPLETE.					